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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/618,380	OWEN ET AL.	
	Examiner	Art Unit	
	Kuen S. Lu	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/11/05, 3/1/06, 8/8/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The Action is responsive to Applicant's Amendment filed July 11, 2003.

2. Please note claims 1-49 are pending.

Priority

3. It is acknowledged Applicant claimed subject matter disclosed in prior U.S. Provisional Applications No.60/449,154, filed 2/2/2003 and No. 60/451,174, filed 2/28/2003, and Applicant relied on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). Also acknowledged is a reference to the prior application has been inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76).

Information Disclosure Statement

4. The information disclosure statements filed August, 2005, March 1, 2006 and August 8, 2006 is in compliance with 37 CFR 1.97(c) and therein has been considered. Its corresponding PTO-1449 has been electronically signed as attached.

Drawings

5. The drawings, filed July 11, 2003, are considered in compliance with 37 CFR 1.81 and accepted.

Specification

6. Claims 5, 13, 21, 32 and 46 are objected to because of the following informalities:

As per claims 5, 13, 21, 32 and 46, each claim recites "audio/visual" which is ambiguous on whether it is "audio and visual" or "audio or visual". Appropriate correction is required.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. § 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7.1. As set forth in MPEP 2106 (II) (A):

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47 USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.

Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application

7.2. As set forth in MPEP 2106 (IV) (B) (1):

Claims to computer-related inventions that are clearly nonstatutory fall into the same general categories as nonstatutory claims in other arts, namely natural phenomena such as magnetism, and abstract ideas or laws of nature which constitute "descriptive material." Abstract ideas, Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759, or the mere manipulation of abstract ideas, Schrader, 22 F.3d at 292-93, 30 USPQ2d at 1457-58, are not patentable. Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data. Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se. Warmerdam, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

7.3. As set forth in MPEP 2106 (IV)(B)(1)(a):

Similarly, computer programs claimed as computer listings *per se, i.e.,* the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. Accordingly, it is important to distinguish claims that define descriptive material *per se from claims* that define statutory inventions.

Products may be either machines, manufactures, or compositions of matter.
A machine is "a concrete thing, consisting of parts or of certain devices and combinations of devices. *Burr v. Duryee. 68* U.S. (1 Wall.) *531, 570 (1863).*
If a claim defines a useful machine or manufacture by identifying the physical structure of the machine or manufacture in terms of its hardware or hardware and software combination, it defines a statutory product. See, e.g., *Lowry, 32 F.3d* at *1583, 32* USPQ2d at *1034-35; Warmerdarn,* 33 F.3d at 1361-62, 31 USPQ2d at 1760.
Office personnel must treat each claim as a whole. The mere fact that a hardware element is recited in a claim does not necessarily limit the claim to a specific machine or manufacture. Cf. *In re Iwahashi, 888* F.2d 1370, 1374-75, 12 USPQ2d 1908, *191 1*-12 (Fed. Cir. 1989), cited with approval in *Alappat,* 33 F.3d at 1544 n.24, 31 USPQ2d at 1558 n_24.

7.4. Claims 1-49 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1, the claimed invention represents a memory stored in which a data structure including some components and the data structure is a logically part of a content repository. The claim is a functional description of the components and does not produce any useful result. However, a tangible, concrete and useful result is required in a **practical application test**. The consequence is non-statutory. In addition, claim concerns a subject matter stored upon a data structure that is not one in any of the statutory categories. The claim is simply directed to *non-statutory subject matter.*

As per claim 9, the claim represents a computer-readable medium containing a data structure comprising components for representing information. It is noted that computer-readable medium comprises wireless telecommunication signals and carrier waves, forms of energy. As forms of energy, the signals and waves are not a matter, composition of matter or product; and do not fall within any one of categories of patentable subject matter.

As per claim 17, the claimed invention represents a memory stored in which a virtual content repository and a data structure including some nodes. The claim is a functional description of the nodes and does not produce any useful result. However, a tangible, concrete and useful result is required in a **practical application test**. The consequence is non-statutory. In addition, claim concerns a subject matter stored upon a data structure that is not one in any of the statutory categories. The claim is simply directed to *non-statutory subject matter.*

As per claims 28, 36 and 49, the claims represent data signals embodied in a transmission medium. It is noted that signals are forms of energy. As forms of energy, the signals and waves are not a matter, composition of matter or product; and do not fall within any one of categories of patentable subject matter.

As per claim 37, the claimed invention represents a memory stored in which a data comprising of objects. The claim is a functional description of data objects and does not

produce any useful result. However, a tangible, concrete and useful result is required in a **practical application test**. The consequence is non-statutory. In addition, claim concerns a subject matter stored upon a data structure that is not one in any of the statutory categories. The claim is simply directed to *non-statutory subject matter.*

As per claims in the groups (2-8), (10-16), (18-27), (29-35) and (38-48), the claims inherit the deficiency of being non-statutory from claims 1, 9, 17, 28 and 37, respectively, and do not remedy the deficiency individually or by inheritance. Therefore, the claims fail to fall within one of statutory categories or fail to produce a tangible, concrete and useful result that is required in a practical application test. The consequence is non-statutory.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.

A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8.1. Claims *1-16, 28-35 and 37-49* are provisionally rejected on the ground of nonstatutory double patenting over claims 1-35 and 37-38, respectively and sequentially, of copending Application No.10/618,519. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.
The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows: claims *1-16, 28-35 and 37-49* of *instant application* are respectively and sequentially a replica of claims 1-35 and 37-38 of copending Application No. 10/618,519.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

9.1. A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9.2. Claims 1-49 are rejected under 35 U.S.C. 102(b) as anticipated by Van Huben et al. (U.S. Patent 6,325,594, issued December 4, 2001, hereafter "Van Huben").

As per claims 1, 9 and 28, Van Huben respectively teaches "A memory for storing data for access by an application program being executed on a computer system, comprising: a data structure stored in said memory"; "A computer readable medium containing a data structure for representing information in a virtual content repository (VCR)" and "A computer data signal embodied in a transmission medium" (See Fig. 2 and Abstract where storage, medium and instruction are provided in a layered system architecture for data repositories managed by a virtual control repository allowing processed to perform on the data via application interfaces), comprising:

"a name" (See Figs. 3B, 11B, col. 11, lines 13-34 and col. 23, lines 41-51 where name is defined as a column for content media and BOM applications);

"a content repository identifier" (See col. 14, lines 15-18 where a unique file identifier is a reference to file in a control repository);

"a plurality of properties" (See Fig. 3A and col. 10, lines 39-56 where objects are classified in according to basic attributes);

"a plurality of property definitions associated with the plurality of properties" (See Fig. 3A and col. 10, lines 39-56 where objects are classified in according to basic attributes and variances exist within each attributes); and

"wherein the data structure is logically part of a virtual content repository (VCR), and wherein the VCR represents at least one content repository" (See col. 14, lines 9-33

where control repository maps entries in a table to physical repositories, for example, file references are mapped to physical storage or URLs).

As per claims 2, 10 and 29, Van Huben teaches the following:
"a repository name" (See col. 14, lines 30-40 where control repositories are name DATA RESPOSITORY C and etc.); and
"a content identifier that is unique for the content repository" (See col. 14, lines 15-20 where file reference is uniquely identified).

As per claims 3, 11 and 30, Van Huben teaches "a reference to a parent data structure" (See Figs. 4A-4B and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes).

As per claims 4, 12 and 31, Van Huben teaches the following:
"property is an association between a name and at least one value" (See col. 10, lines 39-56; col. 17, lines 5-13 where); and
"wherein the at least one value can be stored in one of the at least one content repositories" (See Fig. 3A, col. 10, lines 35-56 and col. 17, lines 5-15 where content is stored in repositories and data is stored in libraries).

As per claims 5, 13 and 32, Van Huben teaches "the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data" (See col. 10,

lines 35-56 where a computer implemented data array the data contained within must be represented as binary data).

As per claims 6, 14 and 33, Van Huben teaches at least one of the following: "property choices; a reference; a data type; whether the property is mandatory; whether the property is multi-valued; whether the property is primary; whether the property is read-only; and whether the property is restricted" (See col. 10, lines 54-55 where a collection of data objects share the same and restricted data format).

As per claims 7, 15 and 34, Van Huben teaches "the data structure is hierarchically related to other data structures and the at least one content repository" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository).

As per claims 8, 16 and 35, Van Huben teaches "the data structure is hierarchically inferior to the at least one content repository" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository).

As per claims 37 and 49, Van Huben teaches "A memory for storing data for access by an application program being executed on a computer system" and "A computer data signal embodied in a transmission medium" (See Fig. 2 and Abstract where storage,

medium and instruction are provided in a layered system architecture for data repositories managed by a virtual control repository allowing processed to perform on the data via application interfaces), comprising:

"a first object to provide a first group of services related to interacting with a hierarchical namespace" (See Fig. 2, element 24 and col. 13, lines 47-49 where transactions in the Control Repository Access Layer perform transactions on Control Repository, a hierarchical namespace);

"a second objects to provide a second group of services related to associating information with the first object" (See Fig. 2, elements 23 & 24 and col. 13, lines 34-43 where a CLIENT/SERVER layer interface is established for communicating the Control and Data Repositories layers);

"a plurality of third objects to provide a third group of services related to describing attributes of the plurality of second objects" (See Fig. 2, elements 22 & 23 and col. 13, lines 17-30 where a Data Management System layer is established to communicate API to Client/Server Interface layer);

"wherein the first object is logically part of a virtual content repository (VCR), and wherein the VCR represents at least one content repository" (See Fig. 2, element 21 and col. 12, lines 24-33 where some functions bundled in the DMS MANAGERS layer belong to and logically part of other layers in the system architecture, including DMS Application, Client/Server, and Control and Data Repositories layers).

As per claim 38, Van Huben teaches "The memory of claim 37 wherein the first group

of services comprises: first functions that enable associating the plurality of first objects with locations in the namespace" (See col. 12, line 66 - col. 13, line 16 and col. 13, lines 47-54 where an object in layer may construct customized modules from a layer below and transactions in the Control Repository Access Layer perform transactions on Control Repository, a hierarchical namespace).

As per claim 39, Van Huben teaches "The memory of claim 37 wherein the second group of services comprises: second functions that enable creating, reading, updating and deleting the information" (See col. 13, lines 47-53 where transactions in the Control Repository Access Layer perform transactions on Control Repository).

As per claim 40, Van Huben teaches "The memory of claim 37 wherein the third group of services comprises: third functions that enable specifying at least one of the following for the plurality of second objects: property choices a reference; an information type; whether the information is mandatory; whether the information is multi-valued; whether the information is primary; whether the information is read-only; and whether the information is restricted (See col. 13, lines 17-22 where utilities in DMS Application layer are needed for user to interact with DMS layer).

As per claim 41, Van Huben teaches "a plurality of fourth objects to specify locations of the plurality of first objects in the namespace" (See col. 14, lines 9-18 where Data Repository layer comprises different names to specify locations of repositories).

As per claim 42, Van Huben teaches "The memory of claim 41 wherein each of the plurality of fourth objects includes: a content repository name" (See col. 14, lines 9-18 col. 14, lines 9-18 where Data Repository layer comprises different named repositories); and

"a content identifier that is unique for the content repository" (See col. 14, lines 9-18 col. 14, lines 9-18 where Data Repository layer comprises different named repositories).

As per claim 43, Van Huben teaches "The memory of claim 37 wherein each of the plurality of first objects includes: a reference to a parent object" (See col. 11, lines 1-12 where Packages layer contains its own objects).

As per claim 44, Van Huben teaches "a fifth object to provide a fifth set of services related to searching the VCR" (See Fig. 2, element 20 and col. 11, lines 45-49 where User Interface Layer allows user to communicate DMS Managers via Application Program Interface);

As per claim 45, Van Huben teaches "The memory of claim 37 wherein: each of the plurality of second objects associates a name and at least one value" (See col. 14, lines 15-18 file is checked in or out based on unique reference identification); and "wherein the at least one value can be stored in one of the at least one content repository" (See col. 13, lines 44-53 Control Repository has stored information may be

deleted).

As per claim 46, Van Huben teaches "The memory of claim 45 wherein: the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data" (See col. 14, lines 40-48 where transactions are operations to perform against Control Repository must be represented as binary data).

As per claim 47, Van Huben teaches "The memory of claim 37 wherein: each of the plurality of first objects is hierarchically related to other objects and to the at least one content repository" (See col. 11, lines 1-12 and col. 13, lines 44-46 where Control Repository Access Layer accesses and is hierarchically one layer above and related to the Control Repository layer).

As per claim 48, Van Huben teaches "a sixth object to provide a sixth set of services related to configuring the VCR" (See Fig. 2, element 20 and col. 11, lines 45-49 where User Interface Layer is the set of services related to and access Data Managers Layer via Application Program Interface).

As per claims 17 and 36, Van Huben teaches "A memory for storing virtual content repository (VCR) information for access by an application program being executed on a computer system" and "teaches "A computer data signal embodied in a transmission medium" (See Fig. 2 and Abstract where storage, medium and instruction are provided

in a layered system architecture for data repositories managed by a virtual control repository allowing processed to perform on the data via application interfaces), comprising:

"a data structure stored in said memory, the data structure including: a root node" (See Fig. 4A and col. 14, lines 9-33 where Project/Data is the root node of the Data Repository data structure);

"a first set of nodes wherein each node in the first set can be hierarchically related to at least one other node in the first set, and wherein all nodes in the first set are hierarchically inferior to the root node" (See Fig. 2, element 24 and col. 13, lines 47-49 where transactions in the Control Repository Access Layer perform transactions on Control Repository, a hierarchical namespace);

"a second set of nodes associated with the first set of nodes, wherein the second set of nodes provides schema information for the first set of nodes" (See Fig. 2, elements 23 & 24 and col. 13, lines 34-43 where a CLIENT/SERVER layer interface is established for communicating the Control and Data Repositories layers);

"wherein each one of the first set of nodes can represent one of: 1) a node container; 2)repository content; and 3)a repository" (See Fig. 2, element 24 and col. 13, lines 47-49 where transactions in the Control Repository Access Layer are content of and perform transactions on Control Repository); and

"wherein each one of the first set of nodes can be associated with the at least one property" (See Fig. 2, element 21 and col. 12, lines 24-33 where some functions bundled in the DMS MANAGERS layer belong to and logically part of other layers in the

system architecture, including DMS Application, Client/Server, and Control and Data Repositories layers).

As per claim 18, Van Huben teaches "The memory of claim 17 wherein: the VCR represents one or more content repositories as a single repository" (See col. 14, lines 9-33 where control repository maps entries in a table to physical repositories, for example, file references are mapped to physical storage or URLs).

As per claim 19, Van Huben teaches "The memory of claim 17 wherein: wherein each one of the first set of nodes has an identifier that indicates its logical location in the hierarchy formed by the first set of nodes" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository);

As per claim 20, Van Huben teaches "The memory of claim 17 wherein: a property is an association between a name and at least one value" (See Fig. 3A, col. 10, lines 35-56 and col. 17, lines 5-15 where content is stored in repositories and data is stored in libraries).

As per claim 21, Van Huben teaches "The memory of claim 20 wherein: the at least one value can be a text string, a number, an image, an audio/visual presentation, or binary data" (See col. 13, lines 47-53 where transactions in the Control Repository

Access Layer perform transactions on Control Repository).

As per claim 22, Van Huben teaches "The memory of claim 17 wherein: a second node belonging to the second set of nodes can be associated with at least one property definition" (See Fig. 2, elements 23 & 24 and col. 13, lines 34-43 where a CLIENT/SERVER layer interface is established for communicating the Control and Data Repositories layers).

As per claim 23, Van Huben teaches "The memory of claim 22 wherein: a property definition can specify at least one of the following for a property: property choices; a reference; a data type; whether the property is mandatory; whether the property is multi-valued; whether the property is primary; whether the property is read-only; and whether the property is restricted" (See col. 13, lines 17-22 where utilities in DMS Application layer are needed for user to interact with DMS layer).

As per claim 24, Van Huben teaches "The memory of claim 22 wherein: there is a property definition for each property associated with each one of the first set of nodes" (See Fig. 3A and col. 10, lines 39-56 where objects are classified in according to basic attributes and variances exist within each attributes).

As per claim 25, Van Huben teaches "The memory of claim 17 wherein: a first node belonging to the first set of nodes that represents a container can be hierarchically

inferior to a second node belonging to the first set of nodes that represents one of: 1) a container; and 2) a repository" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository).

As per claim 26, Van Huben teaches "The memory of claim 17 wherein: a first node belonging to the first set of nodes that represents a repository can be a direct child of the root node" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository).

As per claim 27, Van Huben teaches "The memory of claim 17 wherein: a first node belonging to the first set of nodes that represents content can be a direct or indirect child of a second node belonging to the first set of nodes that represents one of: 1) repository content; 2) a container; and 3) a repository" (See Figs. 4A-4B, col. 11, lines 1-12 and col. 14, lines 9-48 where hierarchical structures are established between parent and child nodes in the file directory, a content repository).

Conclusion

10.1. The prior art made of record

A. U.S. Patent 6,327,594

10.2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

B. U.S. Patent 6,857,012

C. U.S. Patent Application 2004/0024812

D. U.S. Patent 6,360,363

E. U.S. Patent Application 2003/0167455

F. U.S. Patent 7,047,522

Contact Information

11. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kuen S. Lu whose telephone number is (571) 272-4114. The examiner can normally be reached on Monday-Friday (8:00 am-5:00 pm). If attempts to reach the examiner by telephone pre unsuccessful, the examiner's Supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-305-3900.

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